

**ABSTRACT**

**Include Figure 1**

5 A point-to-multipoint network arrangement, method of operation and related  
signals for a network comprising a head-end station and at least one subscriber  
station connected to the head-end by means of a shared medium high-speed  
point-to-multipoint network (preferably a passive optical network). The method  
involves transmitting data upstream using a packet-switched transport protocol  
(e.g. Ethernet) over TDMA. By using high-speed upstream transmission with  
relatively long time slots and relatively short guard bands, the need for complex  
10 ranging schemes is obviated.